

a commutator with a number of segments greater than the number of rotor

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cma 12 -

slots S;

a concentrated winding rotor, having a plurality of simple coils of insulated wire mounted on the same rotor tooth, with a terminal of each of the coils being connected to different segments of the commutator.

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4. An AC commutator (Universal) motor comprising:

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a stator with  $2P$  poles, each pole comprising a coil wound around the tooth of a core of a ferromagnetic material;

a rotor core including a core of ferromagnetic material having  $S$  slots and  $S$  teeth separated from the stator core by an airgap, the stator and rotor core comprising a magnetic circuit;

a commutator with a number of segments  $Z$  bigger than the number of rotor slots  $S$ ;

a concentrated winding rotor, having a plurality of simple coils of insulated wire mounted on the same rotor tooth, with a terminal of each of the coils being connected to different segments of the commutator.

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15. A direct current motor as claimed in claim 1 with part of a magnetic circuit realized with a soft magnetic composite made of metal powder.

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16. A direct current motor as claimed in claim 15, wherein the stator comprises teeth